

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 99/17877

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M27/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61M A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 41 11 122 A (NEHER) 29 April 1993 (1993-04-29)	1-19
A	* THE WHOLE DOCUMENT *	20-42
X	---	
X	GB 1 549 756 A (EVERETT ET AL.) 8 August 1979 (1979-08-08)	1
A	abstract; claims 1-6; figures 1-3	2-42
X	---	
A	US 5 735 833 A (OLSON) 7 April 1998 (1998-04-07)	1-42
A	abstract; figures 1-5	
X	---	
A	US 4 224 941 A (STIVALA) 30 September 1980 (1980-09-30)	1, 9, 10
A	abstract; figures 1,2	
X	---	
	-/-	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

Special categories of cited documents :

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Date of the actual completion of the international search

Date of mailing of the international search report

20 October 1999

27/10/1999

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 661 093 A (BECK ET AL.) 28 April 1987 (1987-04-28) ----	
A, P	EP 0 880 953 A (FLEISCHMANN) 2 December 1998 (1998-12-02) -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inte onal Application No

PCT/US 99/17877

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
DE 4111122 A	29-04-1993	DE	3935818 A	02-05-1991
GB 1549756 A	08-08-1979	CA	1127488 A	13-07-1982
		DE	2809828 A	21-09-1978
		FR	2382900 A	06-10-1978
		JP	1338799 C	29-09-1986
		JP	53113188 A	03-10-1978
		JP	61001148 B	14-01-1986
US 5735833 A	07-04-1998	NONE		
US 4224941 A	30-09-1980	NONE		
US 4661093 A	28-04-1987	DE	3321151 A	13-12-1984
		AT	36242 T	15-08-1988
		DE	3473229 A	15-09-1988
		EP	0128388 A	19-12-1984
		JP	1709724 C	11-11-1992
		JP	3075184 B	29-11-1991
		JP	60007851 A	16-01-1985
		JP	1838924 C	25-04-1994
		JP	4261670 A	17-09-1992
		JP	5029469 B	30-04-1993
		US	4792328 A	20-12-1988
		US	4936834 A	26-06-1990
EP 0880953 A	02-12-1998	DE	19722075 C	01-10-1998
		DE	29715634 U	06-11-1997